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The Genus *Uloma* Dejean (Coleoptera: Tenebrionidae) in Borneo and Sumatra

By Wolfgang Schawaller*), Stuttgart

With 101 figures

Summary

The species of the genus *Uloma* Dejean 1821 (Coleoptera: Tenebrionidae) from Borneo and Sumatra are revised, with 23 species now known from that area. Diagnostic characters (body shape, male antenna, male mentum, male protibia and aedeagus) are figured for all species and a species key is provided. New species: *Uloma bremeri* **n.sp.**, *Uloma burckhardti* **n.sp.**, *Uloma ferreri* **n.sp.**, *Uloma gebieni* **n.sp.**, *Uloma girardi* **n.sp.**, *Uloma kaszabi* **n.sp.**, *Uloma masumotoi* **n.sp.**, *Uloma merkli* **n.sp.** and *Uloma riedeli* **n.sp.**

Zusammenfassung

Die Arten der Gattung *Uloma* Dejean 1821 (Coleoptera: Tenebrionidae) von Borneo und Sumatra werden revidiert, 23 Arten sind nun von dieser Region bekannt. Die diagnostischen Merkmale (Körperproportionen, männliche Antenne, männliches Mentum, männliche Vordertibia und Aedoeagus) werden für alle Arten abgebildet und ein Bestimmungsschlüssel für alle Arten wird aufgestellt. Neue Arten: *Uloma bremeri* **n.sp.**, *Uloma burckhardti* **n.sp.**, *Uloma ferreri* **n.sp.**, *Uloma gebieni* **n.sp.**, *Uloma girardi* **n.sp.**, *Uloma kaszabi* **n.sp.**, *Uloma masumotoi* **n.sp.**, *Uloma merkli* **n.sp.** und *Uloma riedeli* **n.sp.**

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*) Contributions to Tenebrionidae, no. 28. – For no. 27 see: Stuttgarter Beitr. Naturk. (A) 604: 1–11; 2000.

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1. Introduction

The genus *Uloma* Dejean 1821 occurs in nearly all zoogeographical regions and is particularly speciose in the tropics. More than 200 species have been described. Recent taxonomic revisions exist only for a few regions, as for Australia (KASZAB 1982), for Japan, Korea and Taiwan (MASUMOTO & NISHIKAWA 1986) and for the Himalayas (SCHAWALLER 1996). With new material at hand from Borneo (including the adjacent island Banguey) and Sumatra (including the adjacent island Mentawei), I attempt to summarize in this paper all species from that region (now 23 species including 9 new species).

Unfortunately, *Uloma truncata* Fairmaire 1893, described from Borneo, remains unclear, because the description is too poor and the corresponding type was unavailable. However I decided to undertake the risk in establishing a single synonymy rather than leaving all the new material undescribed.

Not included in this paper are the species placed hitherto in *Achthosus* Pascoe 1863 and *Macruloma* Pic 1921 (*Achthosus bihamatus* Fairmaire 1898 from Borneo, *Achthosus furcicollis* Fairmaire 1882 from Sumatra, *Achthosus sinuaticeps* Pic 1921 from Borneo, *Macruloma antimachoides* Fairmaire 1882 from Sumatra and *Macruloma gigas* Pic 1921 from Java). Probably these Indonesian taxa placed in *Achthosus* have to be transferred to *Macruloma,* and probably some of these taxa are synonyms because of the high variability of the male secondary characters on the head and on the pronotum.

The species of *Uloma* occur in rotten wood or under barks of trees and are distributed both in temperate and tropical forests. They can be considered as indicators of mature forests, being highly endangered in nearly all parts of the world.

Acknowledgments

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Abbreviations

CHBH	Collection Prof. Dr. HANS J. BREMER, Heidelberg/Germany;
CJFH	Collection Dr. JULIO FERRER, Haninge/Sweden;
CKAO	Collection KIYOSHI ANDO, Osaka/Japan;
CKMT	Collection Prof. Dr. KIMIO MASUMOTO, Tokyo/Japan;
CRGT	Collection Dr. ROLAND GRIMM, Tübingen/Germany;
HNHM	Hungarian Natural History Museum, Budapest/Hungary (Dr. O. MERKL);
MHNG	Muséum d'Histoire Naturelle, Genève/Suisse (Dr. I. LÖBL);
MHNP	Muséum National d'Histoire Naturelle, Paris/France (Dr. C. GIRARD);
NHMB	Naturhistorisches Museum, Basel/Suisse (Dr. D. BURCKHARDT);
NHMB-F	Naturhistorisches Museum, Basel-Collection FREY/Suisse (E. SPRECHER);
NHMS	Naturhistoriska Riksmuseet, Stockholm/Sweden (J. FERRER);
NKME	Naturkundemuseum, Erfurt/Germany (M. HARTMANN);
SMNS	Staatliches Museum für Naturkunde, Stuttgart/Germany (author).

2. The species

2.1. *Uloma bidens* Gebien 1914 (Figs 1–5)

Records: Borneo (Sabah) (Gebien 1914).

Type material: Borneo, Kinabalu, without date, ♂ holotype NHMB-F (aedeagus missing). – Borneo, Kinabalu, without date, 1 ♂ paratype HNHM.

Material: Borneo, Sabah, Crocker Range, Gunung Emas, 15.–27. IV. 1993 leg. Jenis & Strba, 1 ex. SMNS. – W Sumatra, Solok, VIII. 1995, 1 ex. CHBH. – W Sumatra, Payakumbuh, VIII.–X. 1995, 2 ex. CHBH. – W Sumatra, Padang, IX. 1995, 1 ex. SMNS. – W Sumatra, III.–IX. 1995 local collector, 6 ex. CKMT, 2 ex. SMNS.

Description: Body brown, for shape see Fig. 1, length 6.9–7.3 mm. Head in males with a bihorned elevated anterior transverse ridge, each cheek sometimes with a tubercle or horn, sometimes without modification, behind the anterior ridge with broad excavation. Antenna (Fig. 3) without sexual dimorphism. Mentum in males (Fig. 5) with distinct basolateral impressions and a feeble medial impression, without any setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 1) anteriorly with a distinct impression, basal margin unbordered, punctation only laterally somewhat coarser, surface without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 2. Aedeagus see Fig. 4.

Remarks: The examined males from Borneo have the cheeks with a tubercle or horn, the males from Sumatra have unmodified cheeks; all other characters (body shape, aedeagus, male protibia, male mentum) coincide in both populations.

Distribution: Borneo (type locality), Sumatra (new record).

2.2. *Uloma bremeri* **n.sp.** (Figs 21–25)

Holotype (♂): Borneo, Sabah, Mt. Kinabalu, 1550 m, 23. IV. 1987 leg. Burckhardt & Löbl, MHNG.

Paratypes: Borneo, Sabah, Mt. Kinabalu NP, HQ (= Headquarters), Bukit Ular Trail 1750 m. 29. IV. 1987 leg. Smetana, 1 ♀ MHNG. – Borneo, Sabah, Mt. Kinabalu, 1500 m, 18. VIII. 1981, 1 ♀ NHMS. – Borneo, Sabah, Mt. Kinabalu, 1500 m, 4. III. 1984 leg. Kobayakawa & Yamamoto, 1 ♀ CKAO. – Borneo, Sabah, Mt. Kinabalu, 1550–1850 m, without date leg. Bernhardt, 2 ♀♀ CRGT. – Borneo, Sabah, Crocker Mts., Gunung Emas, 15.–27. IV. 1993 leg. Jenis & Strba, 8 ♂♂, 1 ♀ CHBH. – Borneo, Sabah, Crocker Mts., 500–1900 m, 6.–21. V. 1995 leg. Jenis, 1 ♂ CHBH. – Borneo, Sabah, Crocker Mts., Gunung Emas, 1700 m, 21. III.–20. IV. 1996 leg. Kadlec 3 ♂♂, 1 ♀ SMNS.

Etymology: Named after Prof. Dr. Hans J. Bremer (Heidelberg/Germany), specialist of African and Oriental Tenebrionidae particularly of the genera *Corticeus* and *Amarygmus* sensu lato.

Description: Body black, for shape see Fig. 21, length 11.0–13.0 mm. Head in males with an impression, in females flat. Antenna (Fig. 23) with sexual dimorphism: antennomeres 8–10 in males with a sharp distal margin somewhat pointed at inner side. Mentum in males (Fig. 25) flat and chagreened, with distinct lateral impressions, in these impressions with dense setation. Ligula in males with a few sparse setae. Pronotum (Fig. 21) in males anteriorly with a medial impression, basal margin weakly bordered in the middle and with a weak impression on each side, punctation in the anterior impression coarser, surface between the fine punctation without micropunctation (25x magnification). Punctures of elytral rows broader than stripes,

elytral intervals flat. Last visible sternite unbordered. Protibia in males see Fig. 22. Aedeagus see Fig. 24.

Remarks: Easily to be recognized by the blackish, stout and short body and by these characters quite isolated among the congeners in the aerea in question. It is similar to and might be related with *Uloma heynei* Gebien 1912 from southern India, but in this species the antenna shows no sexual dimorphism, the anterior impression of the male pronotum is of different structure and the aedeagus is different. A further, as yet undescribed species of this small species group occurs in continental Malaysia (HNHM, SMNS).

Distribution: Borneo.

2.3. *Uloma burckhardti* **n.sp.** (Figs 61–65)

Holotype (♂): Borneo, Sabah, Poring Hot Springs, 550–600 m, 9. V. 1987 leg. BURCKHARDT & LÖBL, MHNG.

Paratypes: Borneo, Sabah, Poring Hot Springs, 450 m, 21. VIII. 1995 leg. BALLERIO, 1 ♂ HNHM. – Borneo, Pontianak, 1901, 5 ex. MHNP. – Borneo, Mandor river, 1897, leg. BUFFAT, 1 ♂ MHNP. – Sumatra, Soekaranda, leg. DOHRN, 2 ♂♂, 1 ♀ NHMB-F. – W Sumatra, Padang, V. 1995 local collector, 1 ♂ 2 ♀♀ CKMT. – W Sumatra, VIII.–IX. 1995 local collector, 25 ex. CKMT, 3 ♂♂ 1 ♀ SMNS.

Etymology: Named after Dr. DANIEL BURCKHARDT, curator of Coleoptera in the Basel museum, one of the collectors of the holotype and monographer of the family Passandridae.

Description: Body black, for shape see Fig. 61, length 15.0–16.0 mm. Head without sexual dimorphism, frons impressed and with rough punctation. Antenna (Fig. 63) without sexual dimorphism. Mentum in males (Fig. 65) with deep basolateral excavations and with distinct mediodistal impression, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 61) anteriorly with a medial impression, basal margin separated by a irregular row of rough punctures, punctation on pronotum distinctly unequal with rough punctures in the medial impression and on each side besides the disk, surface between this rough punctation shiny with micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals convex. Last visible sternite distally distinctly bordered in both sexes. Protibia in males see Fig. 62. Aedeagus see Fig. 64.

Remarks: This species can easily be distinguished by the body size, by the unequal pronotal punctation with quite rough punctures only laterally, by the shape of the aedeagus and by the distal border of the last visible sternite.

Distribution: Borneo, Sumatra.

2.4. *Uloma compacta* Fairmaire 1893 (Figs 6–10)

Records: Borneo (Sabah) (GEBIEN 1914).

Material: Borneo, Kinabalu, without date, 2 ex. HNHM. – Borneo, Sabah, Crocker Range NP, NW Keningau, 900–1200 m, 16.–20. XI. 1996 leg. SCHAWALLER, 1 ex. SMNS. – Borneo, Sabah, Crocker Range, Gunung Emas, 15.–27. IX. 1993 leg. JENIS & STRBA, 2 ex. CHBH, 1 ex. SMNS. – Sumatra, Mt. Merapi, III. 1991, 1 ex. CJFH. – W Sumatra, IX. 1995 local collector, 4 ex. CKMT, 1 ex. SMNS.

Description: Body dark brown, for shape see Fig. 6, length 7.0–8.5 mm. Head without sexual dimorphism. Antenna (Fig. 8) without sexual dimorphism. Mentum in males (Fig. 10) with deep lateral impressions and a feeble medial impression, without any setation. Ligula in males with a few sparse setae. Pronotum (Fig. 6) without

sexual dimorphism, without impressions, basal margin unbordered, punctation only laterally somewhat coarser, surface with feeble micropunctation (25x magnification). Punctures of elytral rows not broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 7. Aedeagus see Fig. 9.

Distribution: Borneo (type locality), Sumatra, Java (HNHM det. KASZAB & MERKL).

2.5. *Uloma contracta* Fairmaire 1882 (Figs 11–15)

Records: Sumatra (FAIRMAIRE 1882); Sumatra, Borneo (Sabah) (GEBIEN 1914).

Material: Borneo, Brunei, without date, 2 ex. HNHM (det. KASZAB). – Borneo, Sabah, Mt. Kinabalu NP, Headquarters at Liwagu River, 1500 m, 4. VIII. 1988 leg. SMETANA, 1 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 485 m. 29. VIII. 1988 leg. SMETANA, 1 ex. SMNS. – Borneo, Sabah, Crocker Range NP, Rafflesia Centre, 13.–14. VI. 1996 leg. KODADA, 1 ex. SMNS. – Borneo, Kalimantan, Gulung Palung NP, 1°13S/110°07E, 18.–26. VII. 1993 leg. MERKL, 1 ex. HNHM. – Sumatra, Karo Distr., 7 km NW Lau Balang, 3°04N/98°07E, 270 m, 1. VIII. 1972 leg. KRIKKEN, 1 ex. HNHM.

Description: Body brown, for shape see Fig. 11, length 5.0–6.0 mm. Head without sexual dimorphism. Antenna (Fig. 13) without sexual dimorphism. Mentum in males (Fig. 15) with an even elevated plate with small lateral impressions, without any setation. Ligula in males with a few sparse setae. Pronotum (Fig. 11) without sexual dimorphism, without impressions, basal margin unbordered, punctation only laterally somewhat coarser, surface without micropunctation (25x magnification). Punctures of elytral rows broader than stripes, elytral intervals convex. Last visible sternite unbordered. Protibia in males see Fig. 12. Aedeagus see Fig. 14.

Distribution: Sumatra (type locality), Borneo, Java (HNHM det. KASZAB).

2.6. *Uloma ferreri* **n.sp.** (Figs 16–20)

Holotype (♂): Borneo, Mt. Tibang, 1700 m, leg. MJÖBERG, NHMS.

Paratypes: Borneo, Mt. Tibang, 1700 m, leg. MJÖBERG, 1 ♂ NHMS. – Borneo, Mt. Tibang, 1400 m, leg. MJÖBERG, 1 ♂ SMNS.

Etymology: Named after JULIO FERRER (Hanige/Sweden), specialist of Tenebrionidae particularly of the African fauna.

Description: Body dark brown, for shape see Fig. 16, length 15.0–16.5 mm. Head in males with roughly punctured impression and with anterior transverse keel weakly bihorned (females unknown). Antenna (Fig. 18) without distinct sexual dimorphism. Mentum in males (Fig. 20) with weak basolateral excavations and with weak medial impression, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 16) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum rough and dense in the medial impression and small and sparse on the disk, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals flat. Last visible sternite unbordered in males (females unknown). Protibia in males see Fig. 17. Aedeagus see Fig. 19.

Remarks: Similar in body size, structure of head, shape of the male mentum and shape of the male pronotum to *gebieni* n.sp., but distinctly different by the shape of the male protibia without dorsal keel, by flat elytral intervals and particu-

larly by the shape of the aedeagus with long finger-like parameres with a shortly widened tip.

Distribution: Borneo.

2.7. *Uloma gebieni* **n.sp.** (Figs 41–45)

Holotype (♂): Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 475 m, 23. VIII. 1988 leg. SMETANA, MHNG.

Paratypes: Borneo occ., Pontianak, 1900, 2 ♂♂ MHNP. – Sumatra, Benkoelen, Moeara Tenam, 1935 leg. WALSH, 1 ♂ MHNP. – Sumatra, Medan, leg. MJÖBERG, 2 ♂♂ NHMS. – Sumatra, Kota Tjane, leg. MJÖBERG, 1 ♂ SMNS.

Etymology: Named after the late HANS GEBIEN (1874–1947), who provided valuable comprehensive publications on tenebrionid taxonomy mostly concerning the African and Oriental fauna and whose collection is deposited now in NHMB-F.

Description: Body dark brown to black, for shape see Fig. 41, length 12.3–15.0 mm. Head in males with roughly punctured impression and with anterior transverse keel without horns or teeth (females unknown). Antenna (Fig. 43) with weak sexual dimorphism: antennomeres 5 and 7 in males somewhat prolonged medially. Mentum in males (Fig. 45) with basolateral excavations and with deep medial impression, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 41) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum rough and dense in the medial impression and small and sparse on the disk, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals convex. Last visible sternite distally finely bordered in males (females unknown). Protibia in males see Fig. 42; dorsal side with a longitudinal keel in the anterior part. Aedeagus see Fig. 44.

Remarks: To be recognized by the body size, by the shape of the male pronotum, by the shape of the male mentum with deep medial impression without setation, by the shape of the male antennomeres, by the shape of the male protibia with a longitudinal keel on the dorsal side and by the shape of the aedeagus with short pentagonal parameres.

Distribution: Borneo, Sumatra.

2.8. *Uloma girardi* **n.sp.** (Figs 31–35)

Holotype (♂): Sumatra, Aceh, Ketambe, Leuser NP, 450 m, 26. II.–1. III. 1991 leg. BOCÁK & BOCÁKOVÁ, SMNS.

Paratypes: W Sumatra, Padang, V. 1995 local collector, 1 ♂ CKMT. – W Sumatra, VII.–IX. 1995 local collector, 3 ♂♂ CKMT, 1 ♂ SMNS. – Java occ., Toegoe, 1902, 1 ♂ MHNP. – Java, leg. PASTEUR without date, 1 ♂ MHNP. – Java, coll. LE MOULT in coll. CHATANAY 1914, 1 ♂ MHNP.

Etymology: Named after Dr. CLAUDE GIRARD, curator of Coleoptera in the Paris Museum and specialist of afrotropical Tenebrionidae particularly of termitophilous taxa.

Description: Body brown, for shape see Fig. 31, length 7.8–10.0 mm. Head in males with impression and low, weakly bihorned anterior ridge (females unknown). Antenna (Fig. 33) with sexual dimorphism: in males antennomeres 6–10 with sharp but not pointed distal margin, forming medially in the antennomeres 8–10 a sharp blade-like lamella. Mentum in males (Fig. 35) without basolateral excavations and with weak medial impression, laterally with irregular keel, without setation. Ligula

in males with a few sparse setae. Pronotum in males (Fig. 31) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum rougher and denser in the mediodistal impression, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals flat on disk and slightly convex laterally. Last visible sternite finely bordered distally. Protibia in males see Fig. 32, distally with an internal finger-like prolongation. Aedeagus see Fig. 34.

Remarks: Concerning body shape, the shape of the male pronotum, the shape of the male mentum and the shape of the male protibia quite similar to *westringi,* but the differences in the shape of the male antennomeres, the margins of the last visible sternite and particularly concerning the shape of the aedeagus with a minute knob at the tip of the parameres are considered here as species differences.

Distribution: Sumatra, Java.

2.9. *Uloma kaszabi* **n.sp.** (Figs 26–30)

Holotype (♂): Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 1500–1600 m, 11.–15. XI. 1996 leg. SCHAWALLER, SMNS.

Paratypes: Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 1500–1600 m, 11.–15. XI. 1996 leg. SCHAWALLER, 2 ♀♀ SMNS. – Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 30. V. 1976 leg. FUJIMOTO, 1 ♂ CKAO. – Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 26. IV. 1981 leg. TAO, 1 ♂ CKAO. – Borneo, Sabah, Crocker Range NP, Gunung Emas, 1600 m, 6.–18. VI. 1998 leg. KODADA, 3 ♂♂, 2 ♀♀ SMNS; 2 ♂♂, 1 ♀ HNHM. – Borneo, Sabah, Crocker Range, Gunung Emas, 15.–27. IV. 1993 leg. JENIS & STRBA, 2 ♂♂ CHBH. – Borneo, Sabah, Crocker Range, Gunung Emas, 21. III.–20. IV. 1996 leg. KADLEC, 1 ♂ CHBH. – Borneo, Sabah, Crocker Range, Gunung Alab, 1700 m, 23.–29. V. 1998 leg. KODADA & CIAMPOR, 1 ♂ SMNS. – Borneo, Sabah, Keningau, Kimanis road, 28.–30. IV. 1991 leg. HATAYAMA, 1 ♂ CKMT. – Borneo, Sabah, Sapulut, 23. VI. 1998 leg. KODADA & CIAMPOR, 1 ♂ SMNS.

Etymology: Named after the late Dr. ZOLTAN KASZAB (1915–1986), the former director of the Hungarian Natural History Museum and outstanding specialist of Tenebrionidae (and other Coleoptera) as well as successful explorer of the Mongolian fauna.

Description: Body brown, for shape see Fig. 26, length 7.5–10.0 mm. Head without distinct sexual dimorphism, only in very big males with a very indistinct anterior ridge. Antenna (Fig. 28) with sexual dimorphism: in males antennomeres 6–10 with sharp but not pointed distal margin. Mentum in males (Fig. 30) without basolateral excavations and with weak medial impression, laterally with sparse and long setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 26) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum somewhat rougher but not denser in the mediodistal impression, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals flat. Last visible sternite unbordered. Protibia in males see Fig. 27. Aedeagus see Fig. 29.

Remarks: This species is similar and probably also closer related to *westringi.* Both species share in particular the shape of the sexually dimorph antennae and pronotum. *Uloma kaszabi* n.sp. can be recognized by the different shape of the male protibia without a distal finger-like prolongation, by the existance of a setation on the male mentum and by the shape of the aedeagus with longer spade-like parameres.

Distribution: Borneo.

2.10. *Uloma laesifrons* Fairmaire 1882 (Figs 56–60)

Records: Sumatra (Fairmaire 1882).

Material: Borneo, Sarawak, leg. Xántus, 1 ex. SMNS. – Borneo, Sarawak, Belaga, 14.–16. III. 1990 leg. Riedel, 2 ex. SMNS. – Borneo, Sarawak, Gunung Penrissen, 1000 m, 23. V. 1994 leg. Löbl & Burckhardt, 1 ex. MHNG. – Borneo, Sarawak, Kapit Distr., Rumah Ugap village, Sut river, 3.–9. III. 1994 leg. Horák, 1 ex. CHBH. – W Sumatra, Padang, IX. 1995, 1 ex. CHBH. – W Sumatra, IX. 1995 local collector, 1 ex. CKMT.

Description: Body brown, for shape see Fig. 56, length 5.8–7.5 mm. Head without sexual dimorphism. Antenna (Fig. 58) with weak sexual dimorphism: antennomeres 6–9 with sharp distal margin and somewhat pointed at inner side. Mentum in males (Fig. 60) with distinct basolateral impressions and a feeble medial impression, sometimes with a few scattered setae. Ligula in males with a few sparse setae. Pronotum in males (Fig. 56) anteriorly with a distinct impression, basal margin unbordered, punctation only laterally somewhat coarser, surface without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 57. Aedeagus see Fig. 59.

Remarks: See *U. picicornis*.

Distribution: Borneo (new record), Sumatra (type locality).

2.11. *Uloma masumotoi* **n.sp.** (Figs 36–40)

Holotype (♂): Borneo, Sabah, Crocker Range NP, Gunung Emas, 1600 m, 6.–18. VI. 1996 leg. Kodada, SMNS.

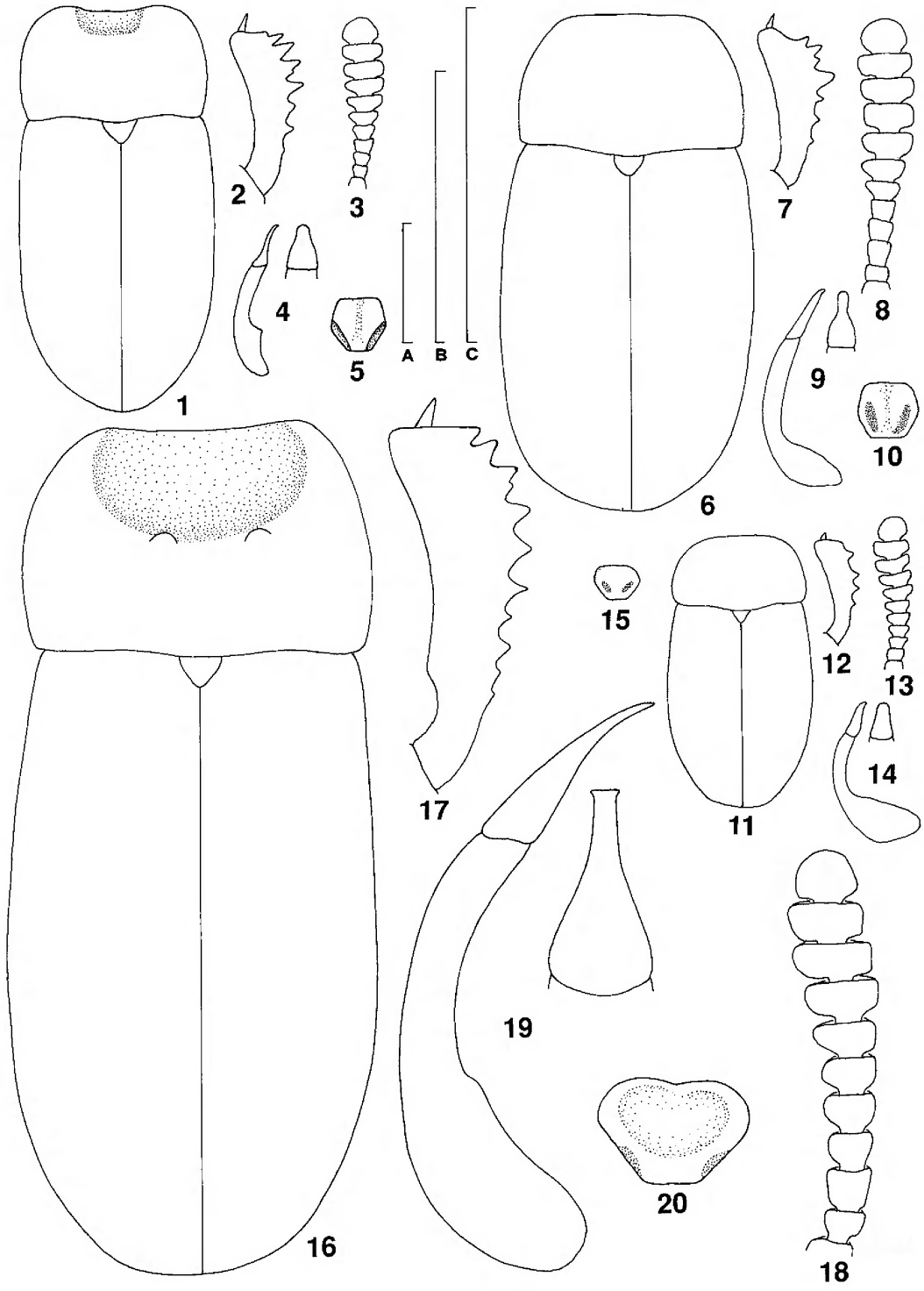
Paratypes: Borneo, Sabah, Crocker Range NP, Gunung Emas, 1600 m, 6.–18. VI. 1996 leg. Kodada, 2 ♂♂, 3 ♀♀ SMNS, 1 ♂ HNHM. – Borneo, Sabah, Crocker Mts., Gunung Emas, 500–1900 m, 6.–21. V. 1995 leg. Jenis, 2 ♂♂ CHBH. – Borneo, Sabah, 10 miles from Keningau, II. 1993 leg. Kimjih, 1 ♂ CHBH. – E Borneo, Babi djoelon, 1937 leg. Walsh, 1 ♂ MHNP. – Borneo occ., Setipas, Singawang, 1897 leg. Ledru, 1 ♂ MHNP. – Sumatra, Benkoelen, Tandjong Sakti, 1935 leg. Walsh, 1 ♂ MHNP.

Etymology: Named after Prof. Dr. Kimio Masumoto (Tokyo/Japan), specialist of Oriental Tenebrionidae.

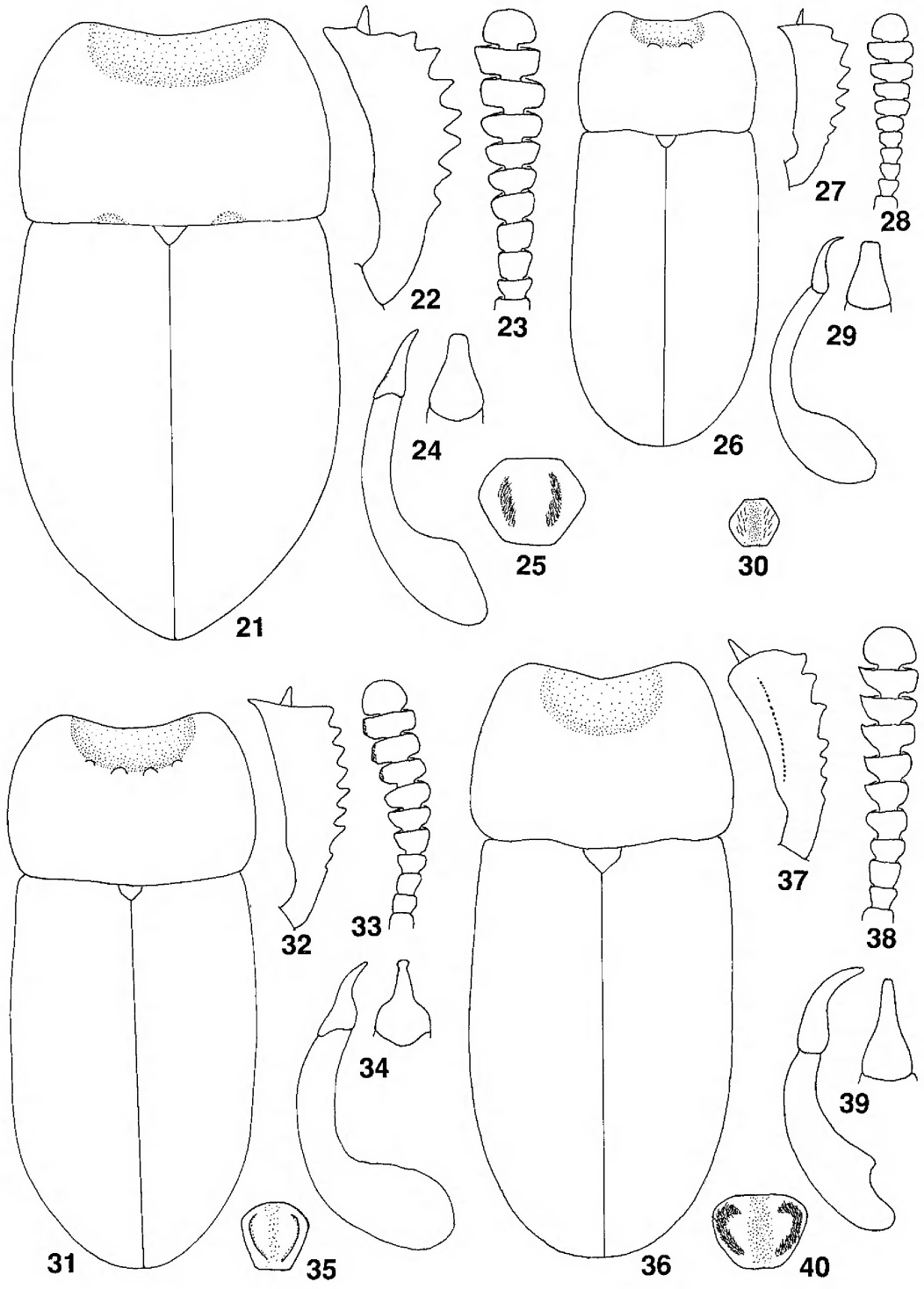
Description: Body brown, for shape see Fig. 36, length 8.5–10 mm. Head without sexual dimorphism, in both sexes with weak impression. Antenna (Fig. 38) with sexual dimorphism: in males antennomeres 6–10 with medially pointed distal margin. Mentum in males (Fig. 40) without basolateral excavations and with weak medial impression, on both sides of this impression with a field of short and dense setae. Ligula in males with a few sparse setae. Pronotum in males (Fig. 36) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum rougher and denser in the mediodistal impression, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 37; dorsal side with a distinct longitudinal row of granules, lacking in females. Aedeagus see Fig. 39.

Remarks: To be recognized by the male protibia with a distinct longitudinal row of granules, by the pointed male antennomeres 6–10, by the shape and setation of the male mentum and by the shape of the aedeagus with long, finger-like parameres.

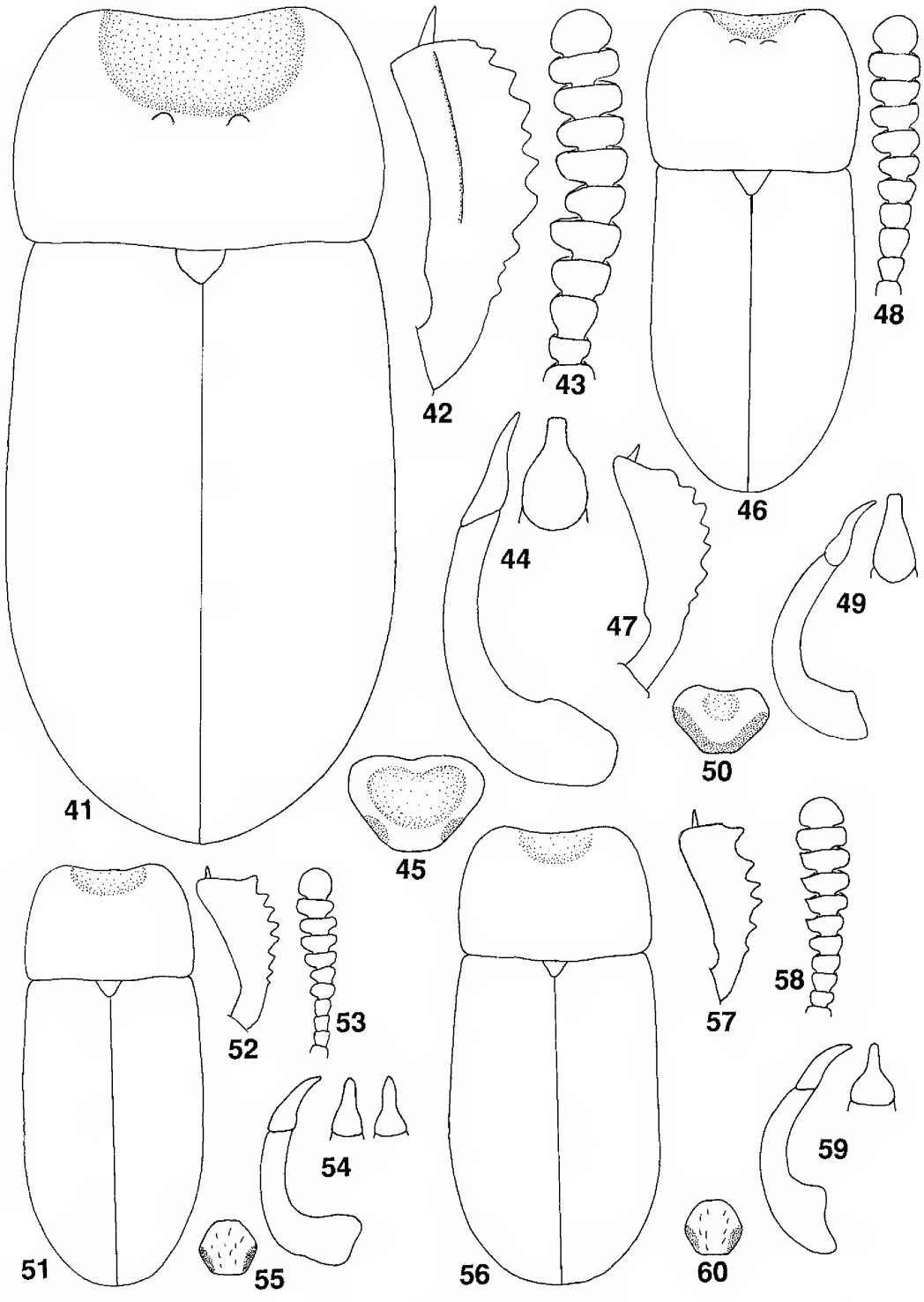
Distribution: Borneo, Sumatra.



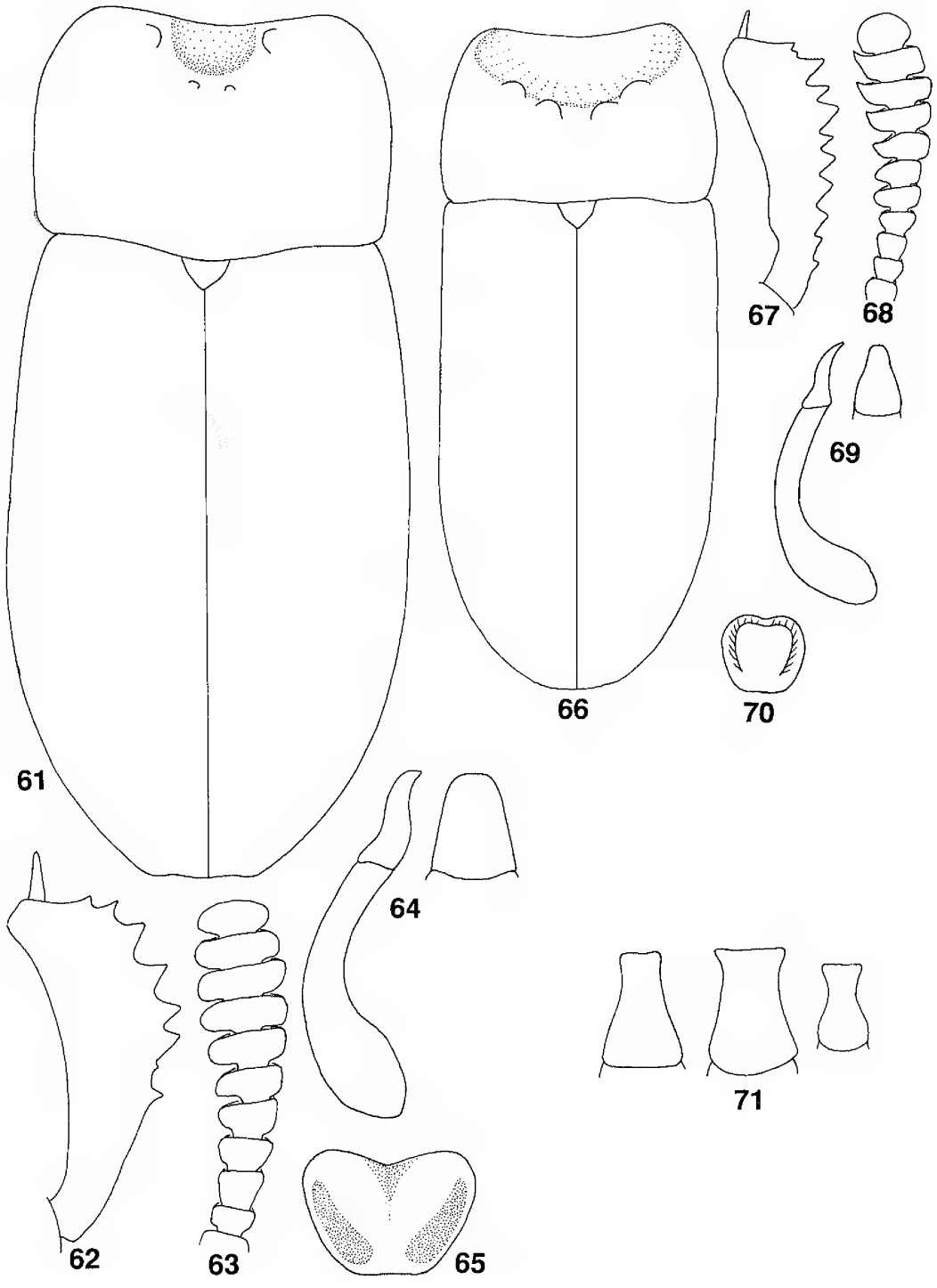
Figs 1–20. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 1–5. *U. bidens*, holotype; – 6–10. *U. compacta*, Sabah; – 11–15. *U. contracta*, Sabah; – 16–20. *U. ferreri* n.sp., holotype. – All scales 2.0 mm: A. male body shape; B. male protibia, male antenna and aedeagus; C. male mentum.



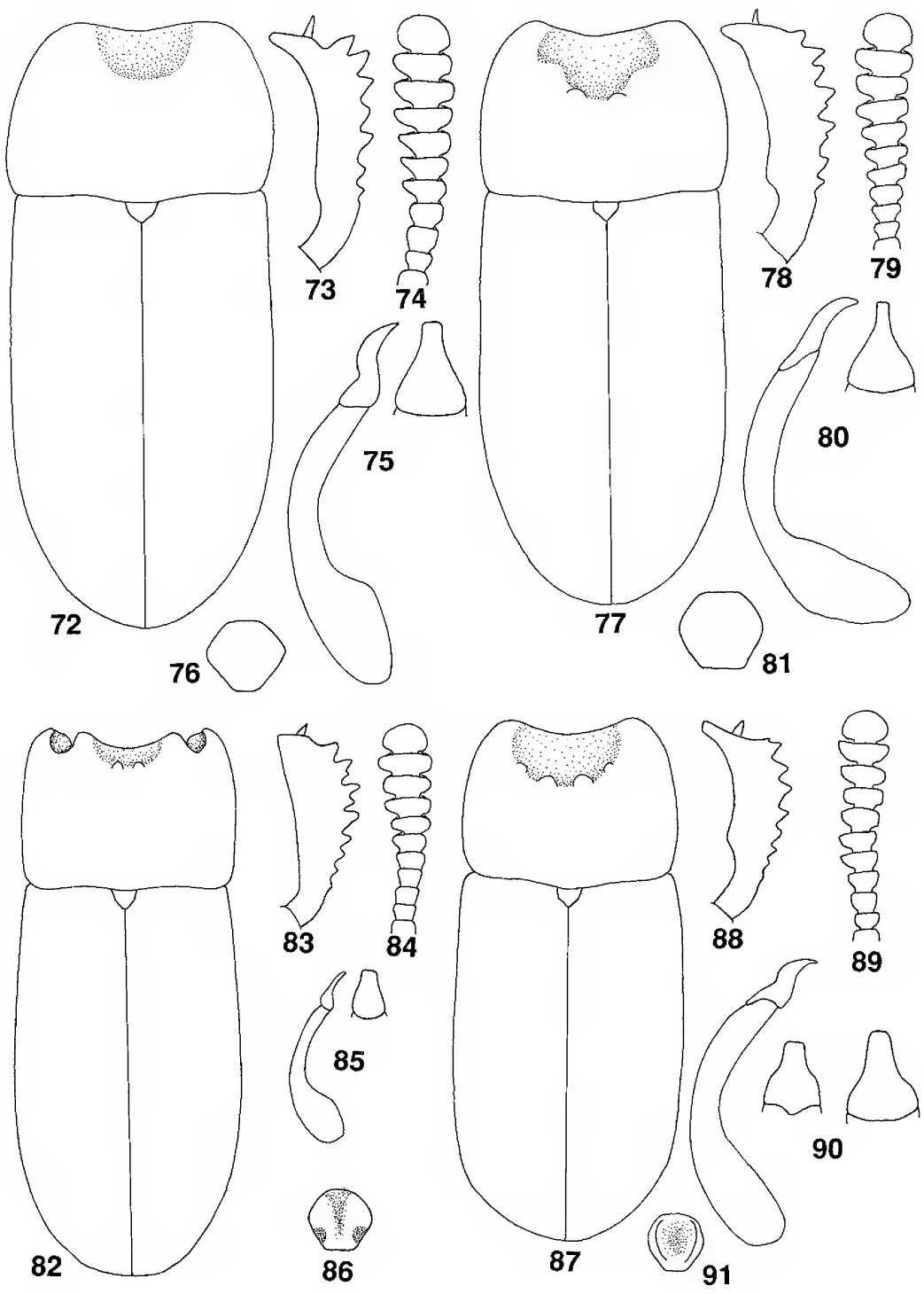
Figs 21–40. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 21–25. *U. bremeri* n.sp., holotype; – 26–30. *U. kaszabi* n.sp., holotype; – 31–35. *U. girardi* n.sp., holotype; – 36–40. *U. masumotoi* n.sp., holotype. – For scales see Figs 1–20.



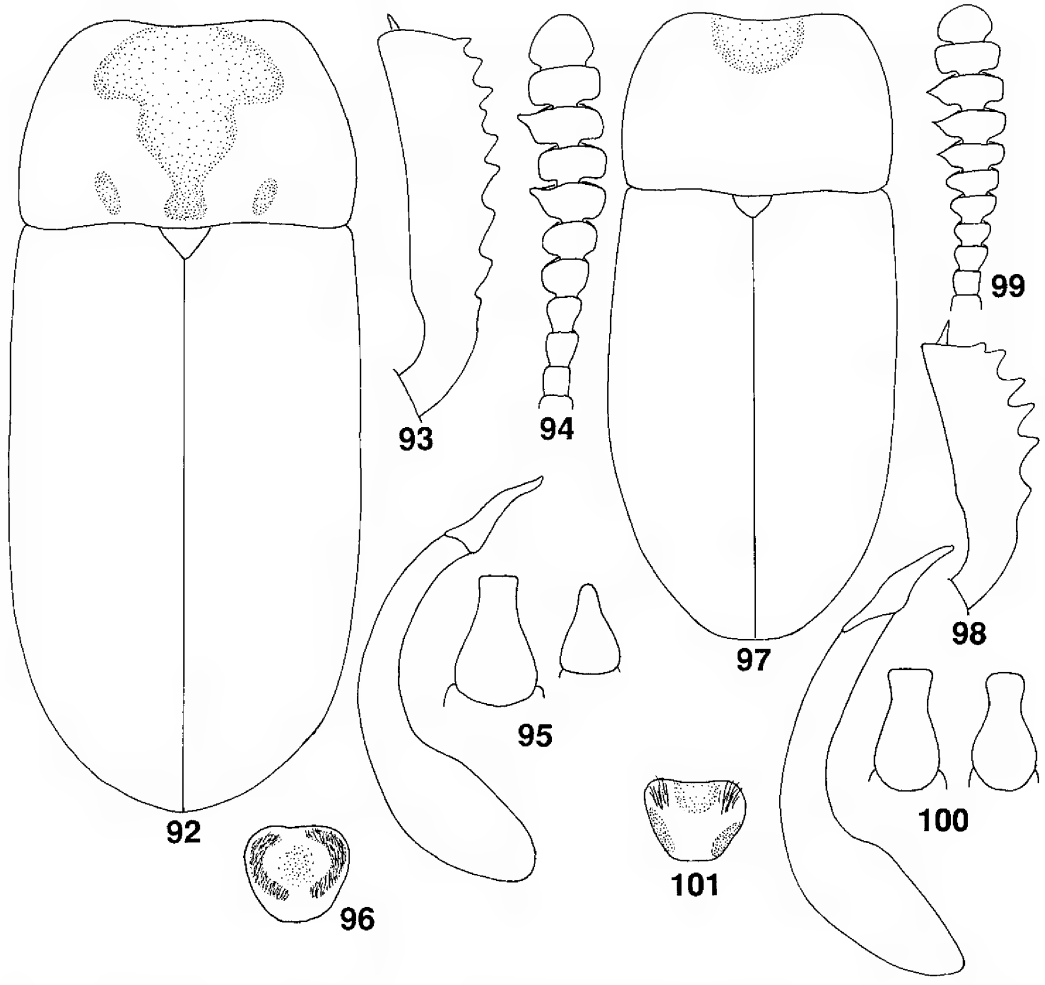
Figs 41–60. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 41–45. *U. gebieni* n.sp., holotype; – 46–50. *U. riedeli* n.sp., holotype; – 51–55. *U. picicornis,* Sumatra, right parameres of a specimen from Sabah; – 56–60. *U. laesifrons,* Sarawak. – For scales see Figs 1–20.



Figs 61–71. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 61–65. *U. burckhardti* n.sp., holotype; – 66–70. *U. merkli* n.sp., holotype; – 71. *U. rubripes,* left parameres of a specimen from Nepal, middle of a big male from Sabah, right of a small male from Sabah. – For scales see Figs 1–20.



Figs 72–91. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 72–76. *U. opacicollis,* holotype; – 77–81. *U. planimentum,* holotype; – 82–86. *U. triemarginata,* Sumatra; – 87–91. *U. westringi,* Borneo, right parameres of a ? type. – For scales see Figs 1–20.



Figs 92–101. Male body shape, right male protibia, right male antenna, male mentum and aedeagus of *Uloma* species. – 92–96. *U. recurva*, holotype; – 97–101. *U. simillima*, holotype. – For scales see Figs 1–20.

2.12. *Uloma merkli* **n.sp.** (Figs 66–70)

Holotype (♂): Borneo, Sabah, Sapulut, 23. VI. 1998 leg. KODADA & CIAMPOR, SMNS.

Paratypes: Borneo, Sabah, Sapulut, 23. VI. 1998 leg. KODADA & CIAMPOR, 1 ♂ HNHM. – Borneo, Sabah, Crocker Range, Gunung Alab, 1700 m, 23.–29. V. 1998 leg. KODADA & CIAMPOR, 2 ♂♂ SMNS. – Borneo, Mt. Tibang, leg. MJÖBERG, 2 ♂♂ NHMS. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, Langanan Waterfalls, 900 m, 14. V. 1987 leg. SMETANA, 1 ♂ MHNG.

Etymology: Named after Dr. OTTÓ MERKL, curator of Coleoptera in the Budapest museum and specialist of Tenebrionidae particularly of the subfamily Lagriinae.

Description: Body brown, for shape see Fig. 66, length 12.0–13.2 mm. Head in males with deep impression and distinct, weakly bihorned anterior ridge (females unknown). Antenna (Fig. 68) with sexual dimorphism: in males antennomeres 7–8 with weak mediodistal prolongation, antennomeres 9–10 with distinct tooth-like mediodistal prolongation. Mentum in males (Fig. 70) without basolateral excava-

tions and with weak medial impression, around this impression with a finely lined circle of sparse and long setae. Ligula in males with a few sparse setae. Pronotum in males (Fig. 66) anteriorly with a distinct inclination on the total width, basal margin unbordered but with small impression on each side besides the middle, punctation on pronotum more or less equal on disk and on the inclination, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows not broader than stripes, elytral intervals flat. Last visible sternite unbordered. Protibia in males see Fig. 67. Aedeagus see Fig. 69.

Remarks: To be recognized by the distinct anterior inclination of the male pronotum, by the sexually dimorph antenna with the antennomeres 7–10 pointed at the inner side, by the shape and setation of the male mentum and by the shape of the aedeagus with the short triangular parameres. The shape of the pronotal inclination is similar in a hitherto unnamed species from Java (CHBH, SMNS), but in this species the aedeagus is different and the last visible sternite is distinctly bordered.

Distribution: Borneo.

2.13. *Uloma opacicollis* Gebien 1927 (Figs 72–76)

Records: Sumatra (Gebien 1927).

Type material: W Sumatra, Gunung Singgalang, without date leg. Jacobson, ♂ holotype NHMB-F.

Material: W Sumatra, IX. 1995 local collector, 3 ex. CKMT, 1 ex. SMNS.

Description: Body brown, for shape see Fig. 72, length 10.0–11.0 mm. Head in males without an elevated anterior transverse ridge and without horns, only with weak excavation. Antenna (Fig. 74) with weak sexual dimorphism: antennomeres 5–10 in males feebly prolonged but without acute tip at inner side. Mentum in males (Fig. 76) nearly flat with feebly elevated margins, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 72) anteriorly with a medial impression, basal margin unbordered, punctation laterally distinctly denser, surface distinctly shagreened (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals flat. Last visible sternite unbordered. Protibia in males see Fig. 73, distally with an internal finger-like prolongation. Aedeagus see Fig. 75.

Distribution: Sumatra.

2.14. *Uloma picicornis* Fairmaire 1882 (Figs 51–55)

Records: Sumatra (Fairmaire 1882); Borneo (Sabah), Sumatra, Java (Gebien 1914).

Material: Borneo, Sarawak, leg. Xántus, 1 ex. HNHM. – Borneo, Brunei, without date, 1 ex. HNHM. – Borneo, Sabah, Tambunan, 15.–20. V. 1987 leg. Burckhardt & Löbl, 3 ex. MHNG, 1 ex. SMNS. – Borneo, Sabah, Tambunan, 29. III. 1984 leg. Hangay, 1 ex. HNHM. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 520 m, 13. V. 1987 leg. Smetana, 2 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 8. V. 1987 leg. Burckhardt & Löbl, 2 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 500 m, 29. XI.–2. XII. 1996 leg. Schawaller, 1 ex. SMNS. – Borneo, Sabah, Ranau, 1500 m, 1. VIII. 1985 leg. Akiyama, 2 ex. HNHM. – Borneo, Sabah, Ranau, 22. VI. 1983 leg. Nagai, 3 ex. CKAO. – Borneo, Sabah, Sepilok, Sandakan, 4. V. 1982 leg. Nagai, 1 ex. CKAO. – Borneo, Sabah, Mt. Kinabalu, 30. III. 1980 leg. Sugiyama, 2 ex. CKMT. – Borneo, Sabah, Batu Punggul Resort, 24. VI.–1. VII. 1996 leg. Kodada, 2 ex. SMNS. – Borneo, Sabah, Crocker Range NP, Gunung Emas, 1600 m, 6.–18. VI. 1996 leg. Kodada, 1 ex. SMNS. – Borneo, Sa-

bah, Crocker Range, Gunung Emas, 15.–27. IV. 1993 leg. JENIS & STRBA, 9 ex. CHBH. – Borneo, Sabah, Crocker Range NP, Rafflesia Centre, 13.–14. VI. 1996 leg. KODADA, 1 ex. SMNS. – Borneo, Sabah, Crocker Range NP, Mawar Waterfall, 17. VI. 1996 leg. KODADA, 1 ex. SMNS. – Borneo, Sabah, Keningau, III.–V. 1989 leg. ITOH, 3 ex. CKAO. – Sumatra, Bengkhulu, 20 km S Muko Muko, 20 m, 16. VIII. 1991 leg. ERBER, 5 ex. SMNS. – N Sumatra, Pematang, Siantar, V. 1989–VIII. 1990 leg. DIEHL, 1 ex. SMNS. – Sumatra, Prov. Aceh-Selatan, Babahrot, 100 m, VII./VIII. 1983 leg. KLAPPERICH, 17 ex. HNHM, 2 ex. SMNS. – Sumatra occ., Payakumbuh, Harau valley, I. 1991 leg. MATEJICEK, 2 ex. HNHM. – Sumatra, Benkoelen, Tandjong Sakti, 1935 leg. WALSH, 20 ex. MHNP. – W Sumatra, IX. 1995 local collector, 5 ex. CKMT.

Description: Body brown, for shape see Fig. 51, length 6.3–7.5 mm. Head without sexual dimorphism. Antenna (Fig. 53) without sexual dimorphism. Mentum in males (Fig. 55) with distinct basolateral impressions and a feeble medial impression, sometimes with a few scattered setae. Ligula in males with a few sparse setae. Pronotum in males (Fig. 51) anteriorly with a distinct impression, basal margin unbordered, punctation only laterally somewhat coarser, surface without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 52. Aedeagus see Fig. 54.

Remarks: *Uloma laesifrons, picicornis* and *scita* are quite similar and are often mixed in the collections. They can be identified with certainty only by investigating the aedeagus (*laesifrons* Fig. 59, *picicornis* Fig. 54, *scita* see SCHAWALLER 1996: Fig. 43). The male body shape in *laesifrons* (Fig. 56) is somewhat broader than in *picicornis* (Fig. 51).

Distribution: Sunda Islands (type locality Sumatra).

2.15. *Uloma planimentum* Gebien 1914 (Figs 77–81)

Records: Borneo (Sabah) (GEBIEN 1914).

Type material: Borneo, Kinabalu, without date, ♂ holotype NHMB-F.

Material: Borneo, Kinabalu, without date, 1 ex. HNHM. – Borneo, Sabah, Crocker Range NP, NW Keningau, 900–1200 m, 16.–20. XI. 1996 leg. SCHAWALLER, 8 ex. SMNS. – Borneo, Sarawak, Gunung Penrissen, 1000 m, 23. V. 1994 leg. BURCKHARDT & LÖBL, 1 ex. MHNG. – Sumatra, 1893 leg. SCHILD, 1 ex. HNHM. – N Sumatra, Brastagi, Gunung Sibayak, 1450–1900 m, 19.–23. II. 1991 leg. BOCÁK & BOCÁKOVÁ, 8 ex. NHMB, 2 ex. SMNS. – N Sumatra, Berastagi, Bandar Baru, 19. IV. 1994 leg. NIRASAWA, 1 ex. CKMT.

Description: Body brown, for shape see Fig. 77, length 10.0–11.0 mm. Head in males without an elevated anterior transverse ridge, without horns or teeth, but frons with excavation. Antenna (Fig. 79) without sexual dimorphism. Mentum in males (Fig. 81) forming a flat plate without impression, chagreened and with bigger punctures basally and laterally, without any setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 77) anteriorly with a distinct medial impression with a pair of small tubercles on its posterior end, basal margin unbordered, punctation laterally somewhat denser, surface without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 78, distally with an internal finger-like prolongation. Aedeagus see Fig. 80.

Distribution: Borneo (type locality), Sumatra, Sumba (HNHM det. KASZAB).

2.16. *Uloma recurva* Gebien 1927 (Figs 92–96)

Records: Sumatra (Gebien 1927).

Type material: W Sumatra, Gunung Singgalang, without date leg. Jacobson, ♂ holotype NHMB-F. – W Sumatra, Gunung Singgalang, without date, 1 ♂ paratype HNHM.

Material: N Sumatra, Berastagi (Tanah Karo), 1490 m, 8. II. 1984 leg. Wiesner & al., 2 ex. NHMB, 1 ex. SMNS. – N Sumatra, Partungkoan, Samosir, 1600 m, 28. VIII. 1981 leg. Erber, 3 ex. SMNS.

Description: Body brown, for shape see Fig. 92, length 10.5–13.0 mm. Head in males with distinctly elevated anterior transverse ridge without horns and teeth bent backwards in the middle, behind this ridge with broad excavation. Antenna (Fig. 94) with sexual dimorphism: antennomeres 7 and 9 in males distinctly pointed at inner side. Mentum in males (Fig. 96) slightly excavated with dense setation in a narrow garland laterally. Ligula in males with a few sparse setae. Pronotum in males (Fig. 92) with a distinct medial impression prolonged backwards, base with 3 small impressions (also in females), basal margin unbordered, punctation laterally somewhat denser, surface with feeble micropunctation (25x magnification). Punctures of elytral rows feebly broader than stripes, elytral intervals more or less flat on the dorsal side, somewhat convex laterally and distally. Last visible sternite unbordered. Protibia in males see Fig. 93. Aedeagus in bigger males (holotype) with a blunt tip (Fig. 95 left), in smaller males with a somewhat rounder tip (Fig. 95 right).

Distribution: Sumatra.

2.17. *Uloma riedeli* **n.sp.** (Figs 46–50)

Holotype (♂): W Sumatra, Bukittinggi, Gunung Merapi, 1900–2100 m, 18. X. 1990 leg. Riedel, SMNS.

Paratypes: W Sumatra, Gunung Singgalang S Bukittinggi, 1900 m, 12. III. 1991 leg. Bocák & Bocáková, 1 ♂, 1 ♀ NHMB.

Etymology: Named after Alexander Riedel (Munich/Germany), successful collector of beetles in southeastern Asia and specialist of Curculionidae.

Description: Body dark brown, for shape see Fig. 46, length 8.5–9.0 mm. Head without sexual dimorphism. Antenna (Fig. 48) without sexual dimorphism. Mentum in males (Fig. 50) with distinct basolateral impressions and with weak medial excavation, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 46) anteriorly with a small medial impression, basal margin unbordered, punctation laterally somewhat denser, surface with feeble micropunctation (25x magnification). Punctures of elytral rows feebly broader than stripes, elytral intervals more or less flat on the dorsal side, somewhat convex laterally and distally. Last visible sternite unbordered. Protibia in males see Fig. 47. Aedeagus see Fig. 49.

Remarks: To be recognized by the relatively long pronotum, by the structure of the male mentum and by the shape of the aedeagus with long, spade-like parameres.

Distribution: Sumatra.

2.18. *Uloma rubripes* (Hope 1831) (Fig. 71)

Records: Borneo, Sumatra (Gebien 1914, 1927 both sub *orientalis*).

Material: Borneo, Sarawak, Belaga, 14.–16. III. 1990 leg. Riedel, 1 ex. SMNS. – Borneo, Sabah, Crocker Range NP, NW Keningau, 900–1200 m, 16.–20. XI. 1996 leg. Schawaller, 6 ex. SMNS. – Borneo, Sabah, Keningau, 25. V. 1992 leg. Ito, 1 ex. CKMT. – Borneo, Sabah,

Keningau, Kimanis Road, 3. III. 1994, 1 ex. CKMT, 1 ex. SMNS. – Borneo, Sabah, 10 miles point from Keningau, II. 1993 leg. KIMJIH, 5 ex. CHBH. – Borneo, Sabah, Keningau, 1988–1989 leg. ITOH, 7 ex. CKAO. – Borneo, Sabah, NW Keningau, 900 m, 15.–19. VIII. 1983 leg. OHBAYASHI, 1 ex. CKAO. – Borneo, Sabah, NW Keningau, 900 m, 15.–19. VIII. 1983 leg. NOTSU, 1 ex. CKAO. – Borneo, Sabah, Crocker Range NP, Gunung Emas, 1500–1700 m, 6.–18. VI. 1996 leg. KODADA, 30 ex. SMNS. – Borneo, Sabah, Crocker Range, Gunung Emas, 500–1900 m, 6.–21. V. 1995 leg. JENIS, 4 ex. CHBH. – Borneo, Sabah, Crocker Range, Gunung Alab, 1700 m, 23.–29. V. 1998 leg. KODADA & CIAMPOR, 1 ex. SMNS. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 500 m, 6.–8. V. 1987 leg. BURCKHARDT & LÖBL, 4 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, Lagnanan Waterfall, 900 m, 14. V. 1987 leg. SMETANA, 1 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 500 m, 29. XI.–2. XII. 1996 leg. SCHAWALLER, 1 ex. SMNS. – Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 1560 m, 3.–13. VIII. 1988 leg. SMETANA, 3 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu NP, Headquarters, 1500–1600 m, 11.–15. XI. 1996 leg. SCHAWALLER, 2 ex. SMNS. – Borneo, Sabah, Headquarters, 29. IV. 1981 leg. TAO, 1 ex. CKAO. – Borneo, Sabah, Headquarters, 8–10. VI. 1976 leg. FUJIMOTO, 1 ex. CKAO. – Borneo, Kinabalu, 1500 m, without date, 1 ex. NHMS. – Borneo, Sabah, Mt. Kinabalu, 1550 m, 23. IV. 1987 leg. BURCKHARDT & LÖBL, 1 ex. MHNG. – Borneo, Sabah, Mt. Kinabalu, 31. III. 1981 leg. SUGIYAMA, 2 ex. CKAO. – Borneo, Sabah, Mt. Trus Madi, 10.–13. IV. 1993 leg. NIRASAWA, 1 ex. CKMT. – Borneo, Sabah, Tambunan, 15.–20. V. 1987 leg. BURCKHARDT & LÖBL, 2 ex. MHNG. – Borneo, Sabah, Kampung Takala, Kinabatang river, 5. VI. 1998 leg. KODADA & CIAMPOR, 2 ex. SMNS. – Borneo, Mt. Tibang, 1400 m, without date leg. MJÖBERG, 1 ex. NHMS. – Borneo occ., Pontianak, 1898–1901, 30 ex. MHNP. – Borneo occ., Sambeh river, 1897 leg. BUFFAT, 3 ex. MHNP. – Borneo occ., Sambey river, Ngabang, 1897 leg. LEDRU, 4 ex. MHNP. – Borneo occ., Setipas, Singawang, 1897 leg. LEDRU, 14 ex. MHNP. – Borneo occ., Lohaban, 1897 leg. LEDRU, 3 ex. MHNP. – Borneo occ., Menterado, 1897 leg. LEDRU, 1 ex. MHNP. – Borneo occ., Goenong Ampar, 1897 leg. MULAT, 2 ex. MHNP. – E Borneo, Babi djoelon, 1937 leg. WALSH, 1 ex. MHNP. – E Borneo, Batan bessi, 1937 leg. WALSH, 9 ex. MHNP. – E Borneo, Pelawan besar, 1937 leg. WALSH, 7 ex. MHNP. – Sumatra occ., Harau Valley, without date, 1 ex. NHMS. – Sumatra, Berastagi, Tanah Karo, 1550 m, 9.–10. II. 1984 leg. WIESNER & al., 1 ex. SMNS. – Sumatra, Jambi, Gunung Tujuh, Kerinci NP, 1700–1900 m, 8. III. 1991 leg. BOCÁK & BOCÁKOVÁ, 3 ex. NHMB. – Sumatra, Medan, Bukit Lawang, 11.–12. X. 1990 leg. RIEDEL, 1 ex. SMNS. – W Sumatra, Mt. Singalang, IV. 1991 leg. JAKL, 1 ex. NHMS. – Sumatra, 25. III. 1984 leg. HANGAY, 2 ex. HNHM. – Sumatra, Prov. Aceh-Selatan, Babahrot, 100 m, VII./VIII. 1983 leg. KLAPPERICH, 5 ex. HNHM. – W Sumatra, VII.–IX. 1995 local collector, 22 ex. CKMT. – W Sumatra, Padang, V. 1995 local collector, 3 ex. CKMT. – W. Sumatra, leg. FRUHSTORFER, 2 ex. MHNP. – Sumatra, Benkoelen, Tandjong Sakti, 1935 leg. WALSH, 21 ex. MHNP. – Mentawei, Si Oban, IV.–VIII. 1894 leg. MODIGLIANI, 1 ex. MHNP.

Description: See SCHAWALLER (1996), aedeagus see Fig. 71.

Remarks: The established "Form" *minor* from Borneo (GEBIEN 1914) and "Rasse" *edentata* form Sumatra (GEBIEN 1927) represent infraspecific variations (concerning the body size and the shape of the male antennal segments) and are not considered herein. One specimen from Kinabalu in HNHM has been identified by the late Dr. KASZAB as *fabraei* Mannerheim 1844 (described from Java), but I cannot find any characters in this specimen justifying a specific separation.

Distribution: Himalayas (type locality Nepal), India, Philippines, Sunda Islands, New Guinea.

2.19. *Uloma rufilabris* Fairmaire 1882

Records: Sumatra (FAIRMAIRE 1882), Sunda Islands (SCHAWALLER 1996).

Material: Borneo, without date, 1 ex. HNHM. – Borneo, Sarawak, Belaga, 14.–16. III. 1990 leg. RIEDEL, 1 ex. SMNS. – Borneo, Sarawak, Belaga, Long Linau, 17.–21. III. 1990 leg. RIEDEL, 3 ex. SMNS. – Borneo, Sabah, Mt. Kinabalu NP, Poring Hot Springs, 480–485 m,

19.–29. VIII. 1988 leg. SMETANA, 12 ex. MHNG, 2 ex. SMNS. – Borneo, Sabah, Batu Punggul Resort, 24. VI.–1. VII. 1996 leg. KODADA, 4 ex. SMNS. – Borneo, Sabah, Crocker Range NP, NW Keningau, 900–1200 m, 16.–20. XI. 1996 leg. SCHAWALLER, 1 ex. SMNS. – Borneo, Sabah, Tambunan, 30. III. 1984 leg. HANGAY, 1 ex. HNHM. – Borneo, Sabah, Kota Belud, 2. I. 1985 leg. NISHIKAWA, 1 ex. CKAO. – Borneo, Sabah, Tenomu, 27. IV. 1984 leg. NISHIKAWA, 2 ex. CKAO. – Sumatra, Prov. Aceh-Selatan, Babahrot, 100 m, 15.–18. VII. 1983 leg. KLAPPERICH, 2 ex. HNHM. – Sumatra, Palembang, leg. KNAPPERT, 4 ex. NHMB-F. – N Sumatra, Dolok Merangir (Simalungun), 180 m, II. 1984 leg. WIESNER & al., 1 ex. NHMB. – W Sumatra, IX. 1995 local collector, 3 ex. CKMT.

Description: See SCHAWALLER (1996).

Distribution: Himalayas, India, Thailand, Sunda Islands (type locality Sumatra).

2.20. *Uloma simillima* Gebien 1914 (Figs 97–101)

Records: Borneo (Sabah, Sarawak), Banguey, Sumatra (GEBIEN 1914).

Type material: Borneo, Kinabalu, without date, ♂ holotype NHMB-F. – Borneo, Kinabalu, without date, 1 ♂ paratype HNHM.

Material: Borneo, Sabah, Mt. Kinabalu NP, Sayap, 1000 m, 25.–29. XI. 1996 leg. SCHAWALLER, 3 ex. SMNS. – W Sumatra, IX. 1995 local collector, 5 ex. CKMT, 1 ex. SMNS.

Description:Body brown, for shape see Fig. 97, length 8.5–10.5 mm. Head in males without an elevated anterior transverse ridge but with 2 small horns or only with traces of horns, behind these horns with weak excavation. Antenna (Fig. 99) with sexual dimorphism: antennomeres 7, 8 and 9 in males with a sharp distal margin somewhat pointed at inner side. Mentum in males (Fig. 101) with distinct basolateral impressions and a weak medial impression distally, without setation or with a bush of setae each side distally. Ligula in males with a few sparse setae. Pronotum in males (Fig. 97) anteriorly with a medial impression, basal margin unbordered, punctation laterally not denser, surface without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals slightly convex. Last visible sternite unbordered. Protibia in males see Fig. 98. Aedeagus see Fig. 100.

Remarks: The small horns on the male head are differently developed and sometimes nearly lacking (in the above small series from Sumatra), the male mentum is sometimes without and sometimes with setation. But I consider these differences only as infraspecific variations. A diagnostic character is the shape of the parameres with the broadened tip (Fig. 100).

Distribution: Borneo (type locality), Banguey, Sumatra.

2.21. *Uloma triemarginata* Blair 1929 (Figs 82–86)

Records: Mentawei (BLAIR 1929).

Material: Sumatra, Tebing-tinggi, leg. SCHULTHEISS, 2 ex. NHMB-F. – N Sumatra, Pematang, Siantar, V. 1989–VIII. 1990 leg. DIEHL, 1 ex. SMNS. – Sumatra, Prov. Aceh-Selatan, Babahrot, 100 m, VII./VIII. 1983 leg. KLAPPERICH, 7 ex. HNHM, 1 ex. SMNS.

Description: Body brown, for shape see Fig. 82, length 8.0–9.5 mm. Head in males with an elevated anterior transverse ridge without horns or teeth, behind this ridge with broad excavation. Antenna (Fig. 84) without sexual dimorphism. Mentum in males (Fig. 86) with distinct basolateral impressions and a longitudinal medi-

al impression, without any setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 82) anteriorly with a distinct medial impression with a pair of tubercles on its posterior end and a deep lateral excavation, basal margin unbordered, punctation laterally somewhat denser, surface with feeble micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals more or less flat on the dorsal side, somewhat convex laterally and distally. Last visible sternite unbordered. Protibia in males see Fig. 83. Aedeagus see Fig. 85.

Distribution: Mentawei (type locality), Sumatra (new record).

2.22. *Uloma truncata* Fairmaire 1893

Records: Borneo (FAIRMAIRE 1893)

Material: Not seen.

Remarks: This species is poorly described upon a single type specimen, which should be deposited in the Leiden Museum. Unfortunately I received no answer from there concerning a loan, thus this species remains unknown to me (and to GEBIEN 1914). The pronotum is said to have a broad anterior impression, the head is distinctly excavated, all tibia denticulated externally, body length 10.0 mm. This combination of characters does not fit to any of the above treated species.

Distribution: Borneo (type locality).

2.23. *Uloma westringi* Mannerheim 1844 (Figs 87–91)

(?) Type material: "No. 48-m" "*Uloma westringii* Mann." "e Java 1843", ♂ holotype, syntype or no type NHMS (labelled by the present author as ? type).

Material: Borneo, Sabah, Crocker Range NP, NW Keningau, 900–1200 m, 16.–20. XI. 1996 leg. SCHAWALLER, 1 ♂ SMNS. – Borneo, Sabah, 16 miles NW Keningau, 1400 m, 12.–19. VIII. 1983 leg. OHBAYASHI, 1 ♂ CKAO.

Description: Body brown, for shape see Fig. 87, length 9.0–11.0 mm. Head in males with deep impression and distinct, weakly bihorned anterior ridge (material from Borneo), or with only weak unhorned anterior ridge (material from Java, ? type). Antenna (Fig. 89) with sexual dimorphism: in males antennomeres 5–10 with sharp but not pointed distal margin. Mentum in males (Fig. 91) without basolateral excavations and with weak medial impression, laterally with irregular keel, without setation. Ligula in males with a few sparse setae. Pronotum in males (Fig. 87) anteriorly with a medial impression, basal margin unbordered, punctation on pronotum rougher and denser in the mediodistal impression, surface between this punctation shiny without micropunctation (25x magnification). Punctures of elytral rows somewhat broader than stripes, elytral intervals flat on disk and slightly convex laterally. Last visible sternite unbordered. Protibia in males see Fig. 88, distally with an internal finger-like prolongation. Aedeagus see Fig. 90.

Remarks: It is not possible to decide if the above listed specimen from Java in NHMS belongs to the type series or not (thus it is not labelled formally as lectotype). I could not find distinct differences (apart from the head structure, see description) in material from Borneo and hope not to fail in identifying both populations as conspecific. To be recognized by the shape of the male antennomeres, by the shape of the male protibia with an interno-distal finger-like prolongation, by the structure of the male mentum without setation and by the shape of the aedeagus

with short parameres having a blunt tip. See also remarks under *girardi* n.sp. and *kaszabi* n.sp.

Distribution: Java (type locality), Borneo (new record).

3. Species key

The key is based mostly on males, thus females might remain unidentified when not collected together with males. For a proper identification the dissection of the aedeagus is necessary. The arrangement of the species does not reflect phylogentical relation. *Uloma truncata* Fairmaire 1893 could not be included herein because of the above mentioned reasons.

1 Body length 11.0–16.0 mm 2
– Body length 5.0–10.0 mm 7

2 Body stout and short, elytra only 1.3x longer than total width; elytra about 2.0x longer than pronotum (Fig. 21) ..... ***bremeri* n.sp.**
– Body longer, elytra 1.5–2.0x longer than total width, elytra about 2.6–3.0x longer than pronotum 3

3 Male mentum slightly excavated and with a complete cordiform narrow garland of short and dense setae. Male antennomeres 5 and 7 distinctly prolonged medially (sometimes reduced particularly in smaller specimens). Aedeagus with spade-like parameres widened to the tip (Fig. 71) ..... ***rubripes***
– Male mentum modified otherwise without setation or with a circle of sparse and long setae. Male antennomeres unmodified or modified otherwise. Aedeagus different 4

4 Male pronotum with a distinct anterior inclination on the total width (Fig. 66). Male mentum with weak medial impression surrounded by a finely lined circle of sparse and long setae (Fig. 70). Male antennomeres 9–10 with distinct tooth-like mediodistal prolongations (Fig. 68). Aedeagus with short triangular parameres (Fig. 69) ..... ***merkli* n.sp.**
– Male pronotum only with an anterior medial impression not covering the total width. Male mentum without setation. Male antennomeres different. Aedeagus different 5

5 Male pronotum with quite unequal punctation, on each side and in the anterior impression with very rough punctures. Last visible sternite distinctly bordered. Parameres spade-like with rounded tip (Fig. 64) ..... ***burckhardti* n.sp.**
– Male pronotum without rough punctures laterally. Last visible sternite unbordered or with only a fine border. Aedeagus different 6

6 Male protibia with longitudinal keel (Fig. 42). Male antennomeres 5 and 7 slightly prolonged medially (Fig. 43). Elytral interval convex. Last visible sternite finely bordered. Parameres with short finger-like, unmodified tip (Fig. 44) ..... ***gebieni* n.sp.**
– Male protibia without keel. Antenna without sexual dimorphism. Elytral intervals flat. Parameres with quite long finger-like, modified tip (Fig. 19) ..... ***ferreri* n.sp.**

7 Pronotum without sexual dimorphism, in males without impression or other modification (3 similar species to be separated only by dissection of the aedeagus) 8
– Pronotum with sexual dimorphism, in males with anterior medial impression or other modification 10

8 Parameres of spade-like structure with rounded tip (Fig. 14). Body length 5.0–6.0 mm ... . ***contracta***
– Parameres longer with finger-like tip (Fig. 9). Body length 5.5–8.5 mm 9

9 Parameres with finger-like tip, sides parallel. Body length 5.5–7.0 mm ..... ***rufilabris***
– Parameres with finger-like tip, sides concave with somewhat knob-like apex (Fig. 9). Body length 7.0–8.5 mm ..... ***compacta***

10 Male pronotum anteriorly with a medial impression and additionally on each side with deep excavations ..... ***triemarginata***
– Male pronotum anteriorly only with more or less deep medial impression 11

11 Male protibia with distinct finger-like prolongation on the medio-distal corner (Figs 32, 73, 78, 88) **12**
– Male protibia with acute or rounded mediodistal corner **15**

12 Male mentum more or less flat, plate-like (Figs 76, 81). Antenna without sexual dimorphism or middle antennomeres in males weakly prolonged medially **13**
– Male mentum with medial excavation. Antenna with sexual dimorphism: middle antennomeres at inner side not prolonged but with sharp margin **14**

13 Male pronotum distinctly shagreened. Antennomeres 5–10 in males weakly prolonged at inner side (Fig. 74). Tip of parameres wide (Fig. 75) ..... ***opacicollis***
– Male pronotum shiny between punctation. Antenna without sexual dimorphism (Fig. 79). Tip of parameres narrow (Fig. 80) ..... ***planimentum***

14 Parameres with a minute knob at the tip (Fig. 34). Last visible sternite finely bordered ... . ***girardi* n.sp.**
– Parameres short and without modified tip (Fig. 90). Last visible sternite unbordered .... ***westringi***

15 Head with sexual dimorphism: in males with distinct elevated anterior transverse ridge or without ridge but with 2 more or less developed horns **16**
– Head without distinct sexual dimorphism, in males without anterior ridge and without horns **18**

16 Antenna without sexual dimorphism (Fig. 3). Male mentum always without setation (Fig. 5). Parameres triangular (Fig. 4). Body length 6.9–7.3 mm ..... ***bidens***
– Middle antennomeres in males partly prolonged medially. Male mentum with setation (sometimes lacking). Parameres longer, spade-like. Body length 8.5–13.0 mm **17**

17 Antennomeres 7 and 9 in males distinctly prolonged medially (Fig. 94). Male mentum with dense setation in a narrow garland laterally (Fig. 96). Tip of parameres not widened (Fig. 95) ..... ***recurva***
– Antennomeres 7–10 in males pointed medially (Fig. 99). Male mentum with a bush of setae distally on each side (sometimes lacking) (Fig. 101). Tip of parameres widened (Fig. 100) ..... ***simillima***

18 Antenna without sexual dimorphism **19**
– Middle antennomeres in males medially not prolonged but with sharp and sometimes pointed distal margin **20**

19 Male mentum with separated basolateral impressions (Fig. 55). Aedeagus with shorter parameres (Fig. 54). Body length 6.3–7.5 mm ..... ***picicornis***
– Male mentum with a deep, connected basal impression (Fig. 50). Aedeagus with longer parameres (Fig. 49). Body length 8.5–9.0 mm ..... ***riedeli* n.sp.**

20 Male protibia on the dorsal side with a distinct longitudinal row of granules (Fig. 37). Aedeagus with long, finger-like parameres (Fig. 39) ..... ***masumotoi* n.sp.**
– Male protibia without granules. Aedeagus different **21**

21 Antennomeres 6–9 in males with sharp margin and somewhat pointed medially (Fig. 58). Male mentum without setation or with a few scattered setae (Fig. 60). Parameres with finger-like tip (Fig. 59) ..... ***laesifrons***
– Antennomeres 6–10 in males with sharp, but not pointed margin medially (Fig. 28). Male mentum laterally with fields of sparse and long setation (Fig. 30). Parameres broader, spade-like (Fig. 29) ..... ***kaszabi* n.sp.**

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Author's address:

Dr. WOLFGANG SCHAWALLER, Staatliches Museum für Naturkunde (Museum am Löwentor), Rosenstein 1, D-70191 Stuttgart, Germany;
e-mail: wschawaller@gmx.de.

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